

BOLDT (H.J.)

SALPINGO-OÖPHORECTOMY AND ITS RESULTS

BY

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SALPINGO-OÖPHORECTOMY AND ITS RESULTS.¹

By H. J. BOLDT, M.D.,

NEW YORK.

WHEN seeking for the best method of treatment of any particular disease or pathological condition we are guided to a certain extent by statistics which show the results of various remedies employed in supposed similar conditions, and it is the object of this paper to give such report on the remedy indicated in the title, applied to some inflammatory and non-inflammatory conditions of the uterine appendages, and to elicit in the discussion the experience of some, whom we know to be in a position which affords them good opportunity for observation of the subject under consideration.

In a discussion before the Academy of Medicine, Dr. Coe cited some of the serious ultimate results of abdominal operations which he had observed, some of which have also been seen by others, but the occurrence of them does not mean that the operation should be abandoned; this knowledge should make us very careful to see that the patient to whom the operation is proposed has a condition which, we know by experience, requires such treatment to restore her to health and a life of usefulness.

It is high time that we compare the results of removing the uterine appendages with the results of other treatment; and should this investigation turn the scale invariably in favor of non-surgical treatment, by all means let us abandon the knife entirely. Such comparison must, however, be made by those who have had experience with various forms of other treatment properly employed on the same patient.

Yet no one will deny but what radical operations have been done formerly which the same surgeon, with his increased experience, would avoid to-day; but is it different with other departments of surgery or medicine? New operations and medicaments are grasped with enthusiasm by many of the profession as the panacea for the respective ailment for which they are praised, only to fall into oblivion with personal and reported experience.

The first question naturally asked by pronounced opponents to salpingo-oöphorectomy is: What became of the women in former years, before such operation was in vogue? Surely the same diseases must have existed then. If the gentlemen could have watched those afflicted with conditions in which I urge the necessity of an operation, it would have been found that they dragged themselves along a life of chronic invalidism until after the menopause, or the appearance of some other acute disease which, owing to their undermined condition, they could not overcome; a certain other proportion, again, died of pelvic abscess, peritonitis, etc., the cause of which was never determined. I speak positively of these last two conditions from personal observation, and I may add that since I some time ago made this statement, which seemed to be accepted at that time with doubt by some, I have had the satisfaction of having my views confirmed several times by others, who made a careful investigation at the post-mortem table. A second question is: Why is it that so many patients with diseased uterine appendages get well with ordinary treatment?

Let us bear in mind the development of the tubes from embryonic life to puberty; in this development we find a partial solution of the problem. Unless we keep before

our eyes the different anatomical phases which these organs undergo, from the moment that the ducts of Müller form to the time of puberty, we cannot scientifically comprehend the pathology, symptomatology, and rational treatment of diseases of the Fallopian tubes. But it would be out of place to consider the subject in this article, and I would refer you to a most valuable contribution by Wilhelm A. Freund, "On the Indications of Operative Treatment of Diseased Tubes," in Volkmann's *Sammlung klinischer Vorträge*, No. 323, in which he vividly describes, with words and illustrations, the serious consequences of abnormal conditions during the development and descent of the tubes.

To further answer the last question, it must be remembered that many cases that are treated get only a temporary relief; they are thought to be cured, and are frequently so reported by the respective physician. The truth is, that when the ailment returns, with its former or greater severity, many of these patients drift into other hands. Where is the operating gynecologist who has not had such cases come to him in either private, clinical, or hospital practice? And who has not operated upon patients for the removal of pyo-salpinx, and the same patients were treated previously with rest, hot douches, tampons, massage, or electricity? But we must not forget the individual sensitiveness of recognizing the condition of the respective adnexa to warrant their removal, which cases do not require operation, but will do as well and better with some of the various forms of local treatment, etc.

To this latter class unquestionably belong the majority of women in whom the entire tubal canal is patent and the opening pervious or only slightly agglutinated, so that the contents of the tube, be they pus or other secretions, can be drained per the utero-vaginal canal, with and after dilatation of the cervico-uterine cavity; either after the method of Doleris¹ or that practised by Gottschalk² and advocated by Polk³ for chronic endometritis. Also the greater number of those suffering with catarrhal salpingitis, and the ordinary form of ovarian inflammation. Yet there are not a few who suffer most intensely, so much so that life is a burden to them, who have been treated for months, perhaps years, with the best therapeutic agents known to us at the present time; but they have a return of the symptoms of a pelveo-peritonitis almost regularly. It is in such cases that the removal of the adnexa is crowned with the best results, even though the disease be not suppurative.

Allow me to quote only one of many examples from a letter to me from a patient in an Eastern State, who had her adnexa removed a short time ago. "No words of mine can express my gratitude for having been delivered from this sickness, from which I have suffered so much during the past years."

There were many cases in my practice upon whom I had spent weary months with treatment, and when by good fortune a period passed with much less pain, they and I thought, "At last we are successful;" however, at the next period it would be the old, old story, rolling in agony for from three or four days to two weeks. After operation they

¹ Read before the New York Academy of Medicine, Obstetrical Section, April 24, 1890.

² *Nouv. Arch. d'obstetr. et de Gyn.*, No. 6. 1889.

³ *Deutsche Medicinalzeitung*, No. 30. 1889.

⁴ *Transactions of American Gynecological Society*, vol. xiii., p. 282.

were, as they expressed themselves in several instances, "new-born;" they once more could walk without being bent up, and were not afraid to ride in a street car or carriage for fear of a jar. Will anyone say that electricity, massage, or any other treatment cures such cases, "melts the adhesions?"—an expression which I have heard several times recently regarding the former treatment. All had been tried faithfully and properly.

It is obvious that the physician who not only sees but who actually carefully observes many patients with diseased adnexa per anum, and who perhaps has operated on a number of cases, is more competent and trustworthy to decide upon treatment, than the physician who treats only few cases and seldom or never operates. There is, however, one error into which the best diagnostician may fall, when intestines have prolapsed into the cul de sac of Douglas, and become fixed there by adhesive inflammation, so that the examiner would expect to find a dilated tube on operation.

Now let us look for one of the causes why some opponents decry salpingo-oöphorectomy almost without discrimination. We frequently hear of a patient on whom this operation has been performed, and she has derived but little or no benefit, perhaps feels worse. She passes into the hands of the general practitioner or electro-therapeutist and is cured. It is argued by those physicians, that had that line of treatment been adopted previously without operation such patients would also have been cured and not be minus their adnexa. This may hold good for some cases, but I deny that such suggestion will hold the test on any case which has been personally observed by me in my own or in the practice of others.

Why should those patients frequently not be relieved by the operation alone? Why are they cured subsequently by the same local treatment which before gave no relief, or but a temporary improvement, only to relapse again in a comparatively short time?

There is not a case of severe salpingitis, especially those of gonorrhoeic origin, which is not accompanied by perimetritic adhesions to a greater or less extent. The starting-point of the perimetritis is invariably the diseased tube, and according to the intensity of the inflammation and the time of its existence will be the severity of the perimetritis; when such appendage is released from its adhesions we will still have perimetritis remaining; not only that, but a fresh exudation forms as the result of tearing those adhesions, so that when these women are examined some time afterward, we frequently feel an exceedingly sensitive exudate, which is occasionally an encapsulated blood-cyst. It is in this condition that the subsequent local treatment, the exciting pathological condition having been removed, will give a permanent cure.

One would be disappointed if he thought that a patient would have complete relief in a few weeks after operation for chronic tubal inflammation; such occurs only in exceptional cases. Health and entire freedom from pain is not restored for a number of months, in some cases perhaps a year or more; this is due to the long and intense suffering which these women have endured, the whole system having been undermined. Much can, however, be done to shorten the continuance of the local pains so frequently present, if the patient is treated locally and generally, as already noted.

It is also important, in case the condition makes it essential to establish the menopause in the respective case, to remove all of the ovarian stroma; though the tubes are removed, the monthly uterine congestion continues for a long time, as can be seen from the cases in which a portion of the ovary remained; to this A. Martin also calls attention by the case cited by him in his article "Zur Pathologie der Eileiter."¹ This, I think, is confirmed by every operator who has had such cases.

In cases accompanied by many adhesions we are also

more apt to get subsequent trouble from adherent intestines, either with each other or to the floor of the pelvis. However, adhesions may form after the simplest kind of an abdominal operation.

Regarding the influence of any particular remedy on adhesions, I have seen two instances in which, at the time of opening the abdomen the first time, it was an utter impossibility to accomplish anything on account of the extensive adhesions existing. Within one year subsequently I had the opportunity to see the intra-abdominal condition again, and to my surprise all adhesions had disappeared. Had these patients been treated with electricity, such result would have been ascribed to it; but no such claim could be made, the patients having been under my personal observation, and the treatment consisted only of good food and a tonic. We know from this that adhesions can and will disappear of their own accord, but why it should be so in some cases and not in others I am unable to explain.

Knowing, as we all certainly do, that some very serious consequences may, and do not infrequently, follow, not immediately to the operation, for that does not often occur in the hands of the experienced operator, but as an ultimate result, it behooves us to look carefully into each case, and not be content with the mere diagnosis of "tubal disease," and then do the operation.

I have always insisted upon the necessity of keeping under observation and treatment the women afflicted with chronic salpingitis, a number of months, and avoid the use of the knife until satisfied that nothing less than the removal of the diseased adnexa will effect a cure. Not so with some acute affections.

Freund, in commenting on my article on "Interstitial Salpingitis," in which I state that I invariably advise immediate operation to patients suffering with puerperal pyo-salpinx, says, that if these cases will first have overcome the puerperal process, leaving only the tubal suppuration behind, they most frequently go on to a spontaneous cure, either with or without rupture of the abscess into the bladder or rectum. He means by this that operative interference is unnecessary. I must differ. If the inflammation is active, although usually the point of rupture is where he states, there are exceptions; it may burst into the abdominal cavity. Again, how much these tubal abscesses after rupture try both patient and physician we all know, and therefore I prefer and advise radical treatment before it has taken place; that is, for all acute cases in which a much distended tube can be recognized. By looking over the appended table, you will find many chronic cases of pyo-salpinx noted, where I state that the probable cause is the puerperal state; this cause is given because, 1. No gonococci could be found in the pus contained in the tube. 2. That by the most careful cross-questioning, no history of infection could be elicited. For such chronic cases the advice of immediate operation is not meant.

The psychical disturbances produced by the operation vary. I have not seen a single case that did not have vertigo, or complained of a full feeling in the head at times—in short, symptoms of cerebral congestion, to which also Dr. H. C. Coe called attention about two years ago. In one case it was so intense that for a number of months it was necessary to resort to venesection and withdraw from one hundred and twenty to two hundred grammes of blood, that being the only remedy which afforded relief. In the greater number of cases with severe disturbance large doses of potassium bromide, either alone or in connection with the use of the Paquelin cautery applied in the nape of the neck, gave a satisfactory result.

This psychical disturbance is the only condition which I have found more marked by the artificial production of the menopause than when the "change of life" comes about naturally. The changes in the genitals, physique, etc., are in my experience identical. I have noted the occurrence of purpura hemorrhagica in one case of sal-

¹ Deutsche medicinische Wochenschrift, 1886, No. xvii., p. 288.

pingo-oöphorectomy, and once after double ovariectomy for ovarian cystomata. Fresh hemorrhages occurred daily about the time of the former menstrual period, for three to four or five days.

Pelvic abscess has been observed but one time after operation in this class of cases. Fistulæ not at all. I attribute this to the non-use of silk for tying the pedicle. Catgut is used exclusively.

Ventral hernia is also a very rare occurrence in my practice. Of the laparotomies done for removal of the

appendages, only one patient acquired this malady, to my knowledge.

If we study the cases upon which salpingo-oöphorectomy has been performed it at once becomes clear to us that both the immediate and ultimate result very much depends upon the condition for which it is done, and the cause and duration of the illness.

The observations upon which this contribution is based are the following one hundred and twelve cases, with eight deaths.

Laparotomies for Removal of Pyo-Salpinx.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Both appendages or right or left removed.	Time of illness.	Adhesions.	Drainage.	Immediate result of operation. Recovery or death.	Probable exciting cause of suppuration.	Ultimate result of operation on the condition of the patient.	Remarks.
1	1885. Jan. 4.	35	M.	6	1	B.	3 mos.	Yes.	Yes.	R.	Puerperal.	Cure.	Had one abortion three months previously; third month gestation. Drainage-tube removed on the second day. Fever; wasting of patient; sweats.
2	Feb. 7.	33	M.	....	....	B.	12 yrs.	Yes.	No.	D.	Gonorrhœa.	.....	Patient was a prostitute of the lowest grade; died on the second day of acute nephritis.
3	Feb. 24.	18	S.	....	....	B.	1 yr.	Yes.	No.	R.	Gonorrhœa.	Cure.	Had three fresh gonorrhœal infections within two years.
4	April 6.	21	M.	....	....	L.	3 yrs.	Yes.	No.	R.	Syphilis.	Improved.	Three years previously had a small non-painful sore on the labia minora, and soon after that a diffuse eruption appeared, which, however, disappeared without treatment.
5	April 11.	34	M.	6	....	R.	4 yrs.	Yes.	Yes.	D.	Puerperal.	.....	Death on the third day from septic peritonitis. The much distended and densely adherent tube ruptured during operation. Left tube enlarged, but did not seem to contain pus.
6	May 23.	29	M.	1	1	R.	3 yrs.	Yes.	Yes.	R.	Syphilis.	No improvement.	Gives history of having had syphilis seven years ago. Complaints of severe pain on the left side, where the tube can be felt very much enlarged.
7	June 2.	37	M.	5	1	L.	2 yrs.	Yes.	No.	R.	Puerperal.	Cure.	.....
8	June 18.	26	M.	3	....	B.	3 yrs.	Yes.	Yes.	D.	Puerperal.	.....	Fourth day, from sepsis.
9	July 14.	26	M.	1	....	L.	9 mos.	Yes.	No.	R.	?	Cure.	.....
10	Dec. 28.	25	M.	5	....	B.	17 days.	Yes.	Yes.	R.	Puerperal.	Cure.	.....
11	1886. March 6.	22	M.	3	....	B.	1 mo.	Yes.	No.	R.	Puerperal.	Cure.	Last child born three weeks previous to operation; chill on third day after confinement. Both tubes were greatly distended with pus; a small portion of the right ovary was not removed, owing to firm adhesions. Drainage for twenty-four hours. Patient menstruated regularly for several months, but has pain in the right ovarian region. February 10, 1887, reports feeling perfectly well, all pain has disappeared, and menstruation ceased.
12	Nov. 17.	33	M.	3	4	L.	4 mos.	Yes.	Yes.	R.	Puerperal?	Not improved.	Child born one month previous; patient had no pain: complains of profuse leucorrhœa; occasionally a gush of discharge came, which was followed by a cessation of leucorrhœa for some time. Bowels constipated; on defecation a pressing was experienced in the rectum, which caused an uneasy feeling in the lower part of the abdomen; both tubes were much distended; the uterus crowded upward and anterior. She complained also of a "very weak feeling;" night-sweats occasionally, and "creeping chills."
13	Nov. 17.	28	M.	3	1	B.	2 yrs.	Yes.	Yes.	R.	Gonorrhœa.	Cure.	Was better for some time after operation, but complains now on the side from which the tube was not removed, so that frequently she is unable to work. The tube removed ruptured while separating the adhesions, and the pus escaped into the abdominal cavity.
14	Nov. 24.	18	M.	1	....	R.	5 mos.	Yes.	No.	R.	?	No improvement.	A small portion of the firmly adherent left ovary was not removed. Patient is perfectly free from pain and discomfort, menstruates regularly. (Seen April 7, 1890. She has ceased to menstruate nearly one year; feels perfectly well; has no reflex symptoms.)
15	1887. Jan. 13.	39	M.	6	1	B.	6 yrs.	Yes.	Yes.	R.	Gonorrhœa.	Cure.	One year after operation she was said to be perfectly well. A report received recently stated that she was under treatment, from which I infer that she is ill, and hence report no improvement, although the attending physician gave me no description of her condition on request.
16	Jan. 23.	22	M.	....	....	B.	2 mos.	Yes.	No.	R.	Syphilis.	Cure.	The tissues were so friable that it was impossible to use a ligature, all hemorrhage was stopped with running catgut sutures. The adhesions were exceedingly dense and extensive. Her health is better now (two years after operation) than it has been for many years.
17	Jan. 31.	27	M.	....	3	R.	4 yrs.	Yes.	No.	R.	Puerperal.	Cure.	Full report published in MEDICAL RECORD, August 20, 1887. Patient still has attacks of cerebral congestion about the menstrual period, but not as intense as formerly, otherwise perfectly well.
18	March 17.	36	M.	....	2	B.	13 yrs.	Yes.	No.	R.	Puerperal.	Cure.	Had been unable for a long time previously to undergo any physical exertion on account of the intense pain produced in hypogastrium, right ovarian region, and back. Two years subsequently, condition good.
19	March 24.	36	M.	4	2	L.	9 mos.	Yes.	No.	R.	Puerperal.	Cure.	Patient probably had an ordinary catarrhal salpingitis dating from her first abortion thirteen years ago, and from the time of the second recent abortion it changed to pyo-salpinx, her suffering becoming so intense that life was a burden to her.
20	May 26.	30	M.	1	5	B.	13 yrs.	Yes.	No.	R.	Puerperal.	Improved.	Abscess of ovary, corresponding to the pyo-salpinx.
21	June 12.	23	M.	1	....	B.	6 mos.	Yes.	No.	R.	Puerperal.	Cure.	Had syphilis several years ago.
22	June 19.	36	M.	2	2	B.	4 yrs.	Yes.	No.	R.	Puerperal.	Cure.	Operated after rupture of the tube. See <i>American Journal of Obstetrics</i> , vol. xxii., No. 3.
23	June 24.	30	M.	....	....	B.	9 yrs.	Yes.	No.	R.	?	Cure.	.....
24	July 27.	29	M.	....	1	B.	3 mos.	Slight	No.	R.	Puerperal.	Cure.	One tube distended with pus, and the other with serum. Operated after rupture of tube. See <i>American Journal of Obstetrics</i> , vol. xxii., No. 3.
25	Aug. 16.	25	M.	....	....	R.	4 yrs.	Yes.	No.	R.	Gonorrhœa.	Improved.	The left tube bound down by adhesions behind the uterus; tube enucleated and fastened with one catgut suture to the parietal peritoneum to prevent the appendage from sinking into its old bed from which it had been loosened, had healed over.
26	Sept. 5.	30	M.	....	....	B.	2 yrs.	Yes.	No.	R.	Gonorrhœa.	Cure.	.....

Laparotomies for Removal of Pyo-Salpinx.—Continued.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Both appendages or right or left removed.	Time of illness.	Adhesions.	Drainage.	Immediate result of operation: recovery or death.	Probable exciting cause of suppuration.	Ultimate result of operation on the condition of the patient.	Remarks.
27	1887. Oct. 13.	28	M.	1	1	B.	.....	Yes.	No.	R.	Traumatic.	Cure.	Patient had a few days previous been curetted, and received intra-uterine treatment; since then had high temperature and chills; both tubes were greatly distended. The contents of tubes were muco-purulent and the muscularis much thickened.
28	Oct. 29.	29	M.	....	....	B.	4 yrs.	No.	No.	R.	?	Cure.	Illness dates from last abortion.
29	Dec. 18.	28	M.	2	6	B.	3 mos.	Yes.	No.	R.	Puerperal.	Cure.	When seen in December, 1888, patient stated that she is improving from month to month.
30	Dec. 21.	25	M.	3	....	B.	1 yr.	Yes.	No.	R.	Gonorrhœa.	Cure.	The pains from which this patient suffered were unusually severe, probably due to the acuteness of the gonorrhœal infection; the husband having a very severe form of the disease.
31	Dec. 29.	29	M.	....	....	B.	8 yrs.	Yes.	No.	R.	Gonorrhœa.	Improved.	
32	Dec. 30.	19	M.	....	....	B.	8 mos.	Yes.	No.	R.	Gonorrhœa.	Cure.	
33	1888. Jan. 20.	39	M.	....	....	B.	11 yrs.	Yes.	No.	D.	Gonorrhœa.	.....	Patient took ether very badly; the tubes, unusually distended, ruptured during extirpation. Operation was hurried for the first reason. An oversight was also made by a faulty message to me, regarding the condition of patient, stating that the patient was doing well. However, the main error was in not putting a drainage-tube in from the beginning, as it was evident that the abdomen was not sufficiently washed out from the amount of pus which escaped into it. An ovarian hæmatoma was present.
34	Jan. 24.	36	M.	6	2	L.	6 yrs.	Yes.	No.	R.	Puerperal.	Improved.	
35	Jan. 27.	29	M.	1	....	B.	2 yrs.	Yes.	No.	R.	Puerperal.	Cure.	
36	Feb. 11.	24	M.	5	....	B.	3 yrs.	Yes.	No.	D.	Puerperal.	.....	Complicated with a suppurating intraligamentous cyst; it and the tubes ruptured during enucleation, the pus escaping into the abdomen. She did not rally from the operation. Had lost very much in flesh and strength the last three months prior to operation.
37	Feb. 17.	30	M.	3	2	B.	3½ yrs.	Yes.	No.	R.	Puerperal.	Cure.	
38	March 11	32	M.	4	....	R.	5 yrs.	Yes.	No.	R.	Puerperal.	Improved.	
39	March 29.	25	M.	1	....	B.	4 yrs.	Yes.	No.	R.	Gonorrhœa.	Cure.	
40	April 10.	33	M.	1	....	B.	7 yrs.	Yes.	No.	R.	Puerperal?	Cure.	
41	April 23.	20	S.	1	....	L.	1 yr.	Yes.	No.	R.	?	Cure.	
42	May 3.	32	M.	1	1	B.	5 yrs.	Yes.	No.	R.	Puerperal.	Cure.	
43	June 10.	35	M.	....	2	L.	2½ yrs.	Yes.	No.	R.	Gonorrhœa.	Not heard from.	
44	June 14.	28	W.	2	....	B.	3 mos.	Yes.	No.	D.	Gonorrhœa.	.....	Died second day. Septicæmia. Each tube contained at least 120 grammes pus, both ruptured during enucleation; the walls were very thin. Suspicion also of recent abortion.
45	June 19.	28	M.	..	....	R.	8 yrs.	Yes.	No.	R.	Gonorrhœa.	No improvement on left side.	Right side better.
46	June 28.	35	M.	4	1	B.	18 mos.	Yes.	No.	R.	Puerperal.	Cure.	
47	Nov. 30.	31	M.	1	....	B.	6 yrs.	Yes.	No.	K.	Gonorrhœa.	Cure.	Seen March 25, 1890. Patient is perfectly well since six months.
48	Dec. 17.	22	W.	1	1	B.	1 yr.	Yes.	No.	R.	Gonorrhœa.	Improved.	
49	1889. Jan. 8.	17	M.	....	....	B.	18 mos.	Yes.	No.	R.	Gonorrhœa.	Improved.	Had been cohabiting since her fourteenth year, with numerous persons.
50	Jan. 22.	36	M.	2	1	B.	8 mos.	Yes.	No.	R.	Gonorrhœa.	Improved.	
51	Jan. 24.	26	M.	1	....	B.	5 yrs.	Yes.	No.	R.	Puerperal.	Improved.	Both tubes ruptured while separating the adhesions. Abscess of left ovary.
52	Feb. 11.	33	M.	5	....	B.	2 weeks.	Yes.	Yes.	R.	Puerperal.	Cured.	Acute salpingitis two weeks since delivery by midwife. Patient's temperature 103.4° to 105° F.; pulse, 130 to 140. Tubes contained about 180 grammes of pus; ruptured during enucleation. Drainage-tube removed on the sixth day. Patient had but little pain on examination—none otherwise.
53	March 1.	c. 30	M.	..	....	L.	6 mos.	Yes.	No.	R.	?	Not heard from.	
54	March 20.	30	M.	6	....	L.	6 yrs.	Yes.	No.	R.	Puerperal.	Cured of her pains.	Has ventral hernia.
55	April 4.	26	M.	2	....	L.	6 yrs.	Yes.	No.	R.	Puerperal.	Improved.	Left tube greatly distended. Abscess of ovary as large as a fist. Adhesions very firm. The tube and ovarian abscess ruptured during enucleation.
56	May 16.	32	M.	2	1	B.	2 mos.	Yes.	No.	R.	Puerperal.	Cured.	Tubes contained about 200 grammes of thick greenish pus. Both ruptured during removal.
57	June 9.	38	M.	4	....	B.	14 yrs.	Yes.	No.	D.	Gonorrhœa.	.....	The adhesions with sigmoid flexure were dense, and the gut surrounded with exudate, which accounted for the excessive constipation from which patient suffered. Its walls were in consequence very friable; the gut tore through while endeavoring to separate the adhesions. A portion was resected and the two ends brought together, first with interrupted sutures and then continuous suture of silk. Death from shock. Patient had regularly recurrent attacks of pelveo-peritonitis, and several attacks of general peritonitis.
58	June 18.	27	M.	3	1	B.	5 mos.	Yes.	Yes.	R.	Gonorrhœa.	Patient felt quite well when she left the hospital two months subsequent to operation. Has not been heard from since.	Complicated with an intra-ligamentous cyst. Hemorrhage from the torn adhesions so excessive that an intra-abdominal gauze packing was necessary. Drainage-tube left in four days. A severe parotitis developed after operation.
59	Aug. 23.	20	M.	....	....	L.	1 yr.	Yes.	No.	R.	Gonorrhœa.	Cure.	Patient has since the operation been free from pain.
60	Sept. 11.	29	S.	....	....	R.	1 yr.	Yes.	No.	R.	?	?	60 and 61 is identical patient. Right pyo-salpinx was first removed on account of the intense pain from which the patient constantly suffered during the last three months. Previously she could bear the pain. The left tube seemed in good condition, it was consequently left; for the first few days the patient felt very well, but then began to complain of the opposite side—finally so much so that she was in constant agony; the adnexa changed perceptibly from one examination to the other (<i>i.e.</i> , twice per week), so that a second laparotomy became a matter of necessity. The tube was considerably distended with pus. Perfectly well when heard from four weeks ago.
61	Oct. 10.	29	S.	....	....	L.	.....	Yes.	No.	R.	?	?	
62	1890. Jan. 15.	40	S.	....	....	B.	10 yrs.	Yes.	No.	R.	Gonorrhœa.	?	Relieved of old pain to some extent.
63	Jan. 17.	17½	S.	....	....	L.	1 yr.	Yes.	No.	R.	Gonorrhœa.	?	Felt perfectly well when she left hospital; not the slightest sign of former pain.
64	Jan. 28.	34	M.	2	....	B.	3 yrs.	Yes.	No.	R.	Gonorrhœa.	?	Feels much better than formerly.
65	Feb. 2.	29	M.	5	....	R.	7 yrs.	Yes.	No.	R.	Puerperal.	?	Feels much better than formerly.
66	Feb. 13.	33	M.	....	....	B.	12 yrs.	Yes.	No.	R.	Gonorrhœa.	?	Feels a little better than formerly.
67	Feb. 18.	43	M.	3	1	B.	2 yrs.	Yes.	No.	R.	?	?	Feels much better than formerly.
68	March 1.	39	M.	13	5	B.	20 days.	Yes.	No.	R.	Puerperal.	.....	Felt perfectly well when she left hospital. Both tubes very much adherent to intestines; both ruptured during enucleation, and pus escaped in abdomen. Washed out and closed.

Laparotomies for Catarrhal Salpingitis.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Duration of illness.	One or both adnexa removed. Right or left.	Adhesions.	Drainage.	Immediate result of operation. Recovery or death.	Ultimate result of operation on the condition for which it was done.	Remarks.
1	1884. Nov. 16.	36	M.	....	....	6 yrs.	B.	Yes.	Yes.	D.	.....	Died on sixth day of peritonitis.
2	Nov. 30.	29	S.	1	....	4 yrs.	B.	Yes.	No.	R.	No improvement.	The cause of the non-improvement is perhaps due to the patient having become a morphine habitué, owing to the constant suffering which she endured.
3	1885. March 6.	30	M.	2	...	6 yrs.	L.	Yes.	No.	R.	Cure.	Ovary three times its normal size—abscess in centre. The pain in the left ovarian region was constant, no matter what treatment was used (due to the abscess).
4	April 24.	30	M.	3	2	7 mos.	L.	Yes.	No.	R.	Cure.	
5	Oct. 21.	32	M.	5	4	5 yrs.	L.	Yes.	No.	R.	Cure.	
6	Nov. 29.	28	S.	1	....	7 yrs.	R.	No.	No.	R.	None.	From the birth of child, seven years previously, she had constant pain in the right ovarian region, and suffered from epileptic seizures. The tube was much thickened and very sensitive; on several occasions during bimanual examination of the appendage, catalepsy was produced, and on two other occasions a true epileptic fit. For a short time after the operation she was free from the attacks, but they gradually returned, and are now more frequent and severer than formerly.
7	1886. Feb. 12.	28	M.	3	....	6 mos.	R.	Yes.	No.	R.	Cure.	The same physical and psychological condition as in Case 6; only that the tube and ovary were bound down by perimetritic adhesions. No medication was used after operation. Reported last in December, 1888. Has not had a single epileptic seizure since operation, and the former excessive ovarian pain gradually diminished, and in between six and eight months after operation it had disappeared entirely.
8	June 28.	28	M.	2	....	7 yrs.	R.	Yes.	No.	R.	Improved.	When twenty-one years old she was infected by husband with gonorrhœa. The contents of tube were sero-purulent, the condition undergoing change to pyo-salpinx. The left tube seemed normal.
9	Sept. 13.	23	M.	1	....	2 yrs.	L.	Yes.	No.	R.	Cure.	An ovarian hæmatoma also existed.
10	Dec. 29.	20	S.	....	....	3 yrs.	L.	No.	No.	R.	Cure.	Macroscopical appearances of the tube and ovary did not explain the cause of the intense suffering, though both were enlarged and ovary cystic; entirely free from adhesions. The specimen was unfortunately lost, so that a microscopical examination could not be made.
11	1887. Jan. 23.	35	M.	....	....	5 yrs.	L.	Yes.	No.	R.	Cure.	Ovary cirrhotic.
12	May 7.	30	M.	2	....	8 yrs.	L.	No.	No.	R.	Improved.	Small abscess in ovary, otherwise cystic degeneration. When last seen by me, about one year after operation, she was much improved. Report from family physician, however, received two weeks ago, states that she is entirely well now.
13	May 19.	27	M.	1	....	10 yrs.	B.	Yes.	No.	R.	Cure.	
14	June 11.	29	M.	....	....	4 yrs.	B.	Yes.	No.	R.	Improved.	
15	July 8.	26	M.	2	1	4 mos.	R.	Yes.	No.	R.	Cure.	
16	July 12.	51	M.	3	....	2 yrs.	R.	No.	No.	R.	Cure.	Right ovarian abscess, size of a walnut.
17	Aug. 22.	19	M.	....	1	6 mos.	R.	Yes.	No.	R.	Cure.	A smooth mass, the size of a hen's egg, tender to touch, was felt to the right of the uterus; the much thickened tube could be felt going off from the uterus toward this mass, it was also very sensitive. The small tumor proved sarcoma of the ovary.
18	Sept. 9.	27	M.	....	....	7 yrs.	B.	Yes.	No.	R.	Cure.	
19	Oct. 20.	31	M.	....	....	9 yrs.	L.	No.	No.	R.	Cure.	Patient had been losing much blood at irregular intervals. The right adnexa had been removed by another operator. Tube-wall much hypertrophied. Sarcoma of the corresponding ovary size of a fowl's egg.
20	1888. Feb. 10.	27	M.	....	....	2 yrs.	L.	Yes.	No.	R.	Improved.	
21	Feb. 13.	36	M.	1	1	16 yrs.	L.	Yes.	No.	R.	Cure.	Sigmoid flexure was torn half-way across in separating the adhesions. Lembert suture. Adhesions very extensive and firm.
22	May 19.	41	M.	4	3	3 yrs.	L.	Yes.	No.	R.	Cure.	
23	June 12.	39	M.	4	....	17 yrs.	B.	Yes.	No.	R.	Improved.	
24	1889. Feb. 16.	32	M.	1	....	13 yrs.	B.	Yes.	No.	R.	Cure.	Patient during the last seven years of her illness was never without pain; half of the time she was unable to do anything on account of recurring attacks of pelveo-peritonitis. Excessive metrorrhagia. She has since operation been entirely free from pain, and says that she has not felt so well for fourteen years as now.

Laparotomies for Tubercular Salpingitis.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Duration of illness.	One or both adnexa removed. Right or left.	Adhesions.	Drainage.	Immediate result of operation. Recovery or death.	Ultimate result of operation on the condition for which it was done.	Remarks.
1	1888. Feb. 11.	38	M.	....	....	.....	R.	Yes.	No.	R.	Cure of pain and bleeding.	Symptoms were constant pain on the right side, and profuse hemorrhage. Congenital absence of the left appendage. Am informed that patient has since died of pulmonary tuberculosis. (Both tube and ovary were tubercular.)
2	1890. Feb. 7.	23	M.	....	....	7 mos.	B.	Yes.	No.	R.	Under observation. Cure of the former pains.	Patient felt well until seven months ago, when pains began in the left ovarian region, which gradually increased in severity and spread over the entire abdomen, at the same time profuse metrorrhagia was present. This was benefited by local treatment in another hospital the pains, however, continued. On admission into the hospital, the general condition of the patient was poor; anæmic, had lost flesh; elevation of temperature, 99.8° F. in axilla; diarrhœa. The uterus firmly fixed by a large mass on the left side, with irregular boundaries, quite firm to touch, pushing the uterus upward and forward; a similar mass on the right side, but not so large. The masses felt proved to be the tubes and ovaries, studded with tubercles and surrounded by an exudation material, which was encapsulated. The uterus was separated from the rest of the upper part of the abdominal cavity by a thick membrane, which formed a roof, this and the adherent intestines were thickly studded with tubercles; there was very little ascitic fluid present. The peritonitis was undoubtedly secondary, the tubercular salpingitis the primary affection.

Laparotomies for the Removal of the Uterine Appendages, not the Seat of Marked Disease.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Duration of illness.	Condition for which the operation was done.	One or both appendages removed.	Adhesions.	Drainage.	Immediate result of operation. Recovery or death.	Ultimate effect of operation on the condition for which it was done.	Remarks.
1	1885. Jan. 3.	24	M.	....	2	2 yrs.	Large interstitial fibroid.	B.	Yes.	No.	R.	Cure.	Was seen two years subsequent to operation, when the tumor had decreased fully three-fourths of its original size. Hemorrhage, which was before operation very profuse, had ceased entirely.
2	March 7.	24	M.	....	....	9 yrs.	Hystero-epilepsy.	B.	No.	No.	R.	Improved.	The disease began soon after the appearance of menstruation; attacks frequent and very severe about the menstrual period. In the beginning no change was noticed from the operation. Information received from an acquaintance, December 5, 1888, states that the attacks lately became diminished in frequency and severity; the improvement being more marked from month to month.
3	1886. March 17.	48	M.	3	....	5 yrs.	Large fibroid, causing pain and hemorrhage.	B.	Yes.	No.	R.	Hemorrhage and pain ceased.	
4	1887. Aug. 26.	30	M.	....	....	....	Interstitial fibroid, causing pain and hemorrhage.	B.	Yes.	No.	R.	Bleeding and pain ceased.	
5	Sept. 2.	35	M.	3	...	1 yr.	Interstitial fibroid causing pain and hemorrhage.	B.	Yes.	No.	R.	Cure. (?)	Bleeding and pain had ceased when patient left hospital. Have been unable to trace her since.
6	1888. May 14.	17	S.	....	....	4 yrs.	Hystero-epilepsy from time menses began.	B.	No.	No.	R.	None.	Both tubes and ovaries were prolapsed. Epileptic and cataleptic seizures were most severe and frequent about the menstrual period, and seemed to take their origin from the appendages. Numerous times, in the clinic and hospital, an attack was brought on by pressing either one of the ovaries during bimanual examination. For six months subsequent to operation she was entirely well, so that a permanent cure was thought of, but then the attacks gradually returned again, and are now, from last report, as severe as ever.
7	June 14.	38	M.	...	....	Several years.	Hystero-epilepsy.	B.	Yes.	No.	R.	None.	
8	June 28.	29	S.	....	....	6 yrs.	Interstitial fibroid.	B.	Yes.	No.	R.	Hemorrhage and pain stopped.	
9	July 10.	26	M.	....	....	1 yr.	Constant hemorrhage.	B.	No.	No.	R.	Cure.	Patient had undergone every imaginable form of treatment, in my care and at the hands of other physicians, without benefit; finally her physician sent her back to me for operation. She had wasted to a mere skeleton from a former moderately corpulent woman.

Laparotomies for Hydro- and Hæmato-Salpinx.

Number.	Date of operation.	Age.	Married or single.	Number of children.	Number of abortions.	Time of illness.	One or both adnexa removed.	Hydro- or Hæmato-Salpinx.	Adhesions.	Drainage.	Immediate result of operation. Recovery or death.	Ultimate result of the operation on the condition of the patient.	Remarks.
1	1885. Jan. 17.	28	M.	...	....	5 yrs.	B.	Hydro-salpinx.	Yes.	No.	R.	Cure.	
2	Jan. 29.	43	M.	10	....	3 mos.	R.	Hæmato-salpinx.	Yes.	Yes.	R.	Cure.	Had retro-uterine hæmatocele and beginning peritonitis; it was on account of the latter that the operation was done without delay. Drainage-tube removed on the ninth day.
3	1886. Nov. 30.	27	M.	....	....	6 yrs.	R.	Hydro-salpinx.	Yes.	Yes.	R.	Not improved.	
4	Dec. 30.	24	M.	....	1	4 yrs.	R.	Hydro-salpinx.	Yes.	No.	R.	Cure.	Had a severe attack of general peritonitis subsequent to operation, due probably to eversion of intestines, which became necessary to find the source of a profuse hemorrhage occurring during operation.
5	1887. Jan. 23.	30	M.	....	....	6 yrs.	L.	Hydro-salpinx.	Yes.	No.	R.	Cure.	
6	July 14.	28	M.	2	....	1 yr.	B.	Double hydro-salpinx.	Yes.	No.	R.	Not improved.	A portion of the right ovary was not removed, owing to very dense adhesions; from this remnant subsequently an ovarian cyst arose, which necessitated another laparotomy.
7	Nov. 8.	29	M.	1	1	2 yrs.	L.	Hydro-salpinx.	No.	No.	R.	Cure.	
8	1888. March 6.	21	S.	....	....	?	B.	Hydro-salpinx.	Yes.	No.	R.	Not improved.	
9	May 6.	28	M.	1	1	4 yrs.	R.	Hydro-salpinx.	Yes.	No.	R.	Cure.	

Three cases of removal of the appendages for other conditions, viz., two tubal pregnancy, and one ovarian hæmatoma which had ruptured and produced peritonitis from the blood effused in the abdomen, are not enumerated in this table. These cases also recovered.

Special attention is called to cases Nos. 10, 11, 18, 25, 27, 52, 56, 57, 58, and 68 of operations for pyo-salpinx, and Nos. 6, 7, 16, 19, and 21, for catarrhal salpingitis. Also to the cases where the appendages were removed for fibro-myomata. Case 60 is first noted as "no effect;" the same case 61 is marked "cured" after removal of the other tube; as per last report from the patient.

If no symptoms occur within two or three months after

an abortion or confinement, and no history of infection can be elicited or gonococci found in the vaginal secretions, the case is classed as "cause unknown."

To make a short résumé of the principal part of the table, we have the following:

Not improved by the operation.....	10 patients.
Improved by the operation.....	24 "
Cured by the operation.....	58 "
Not heard from, or insufficient elapse of time since operation.....	11 "
Died from the result of operation.....	8 "
Case 60 and 61 enumerated under one head.....	1 "
Total.....	112 "

Pyo-salpinx.

Class A. Both adnexa removed for gonorrhœal pyo-salpinx	16 times.
Class B. Right adnexa removed for gonorrhœal pyo-salpinx	2 "
Class C. Left adnexa removed for gonorrhœal pyo-salpinx	2 "
Division 1. 3 cases had symptoms less than one year.	
" 2. 7 " " " one to three years.	
" 3 1 " " " from three to five years.	
" 4. 5 " " " more than five years.	

In Division 1, there was 1 positive cure; 1 not heard from, but felt well when last seen; 1 perfectly relieved of former symptoms, yet the time since operation is too short to give a definite report. In Division 2, there were 4 cases positive and complete cure, 3 cases improvement. In Division 3, there was 1 case complete cure. In Division 4, there were 2 cases complete cure, 3 cases improvement.

Class B. 1. One patient had symptoms between three and five years.	
2. 7 " " " more than five years.	
1st. Improved. 2d. No effect was produced.	
Class C. Two patients had symptoms between one and three years.	
One cure. One improvement when last seen.	

From patients in whom the pyo-salpinx seemed to arise in connection with a confinement or an abortion :

Class A. Both adnexa	19 times.
" B. Right adnexa only	2 "
" C. Left adnexa only	7 "

In Class A: In 9 cases the disease dated less than one year; these were all cured. In 2 cases the disease dated between one and three years; both cured. In 4 cases the disease dated between three and five years; among them we note two complete cures, and two improvements. In 3 cases the disease lasted more than five years; two cures, and one improvement.

In Class B: There was 1 case between three and five years, and 1 case more than five years; both improved.

In Class C: Three times less than one year: 1 no effect, one cure, and one not heard from. Once between one and three years; cure. Once between three and five years; improvement. Twice more than five years; one improvement, one cure.

The double pyo-salpinx was due, once to syphilis; one complete cure; its duration was less than one year. A right pyo-salpinx, due to syphilis. Between one and three years' duration, once, with no improvement. One left syphilitic pyo-salpinx; improvement.

Of no definite origin we note: Double pyo-salpinx, three times. Duration between one and three years, once; improvement. Duration between three and five years, once; cure. Duration more than five years, once; cure.

Right side, twice. Once, less than one year; no improvement. Once, between one and three years; no improvement.

The left tube is noted three times. Once, less than one year duration; cure. Twice, between one and three years; both cured.

On fibro-myomata, provided the neoplasm is interstitial and has not undergone any degenerative changes, or is not tightly impacted in the pelvis, the operation has invariably a good result; it is different, however, in cases of severe affections of the nervous system, as can already be seen by the few cases tabulated by me.

I believe, also, that the majority of those cases of catarrhal salpingitis which are so exceedingly obstinate, and in which the symptoms will but temporarily improve, can be traced to specific infection.

It may not be amiss here to make a note as to the frequency of gynecological patients suffering with some form of salpingitis. For this research I am indebted to my assistant, Dr. C. J. Musgrave, who kindly reviewed my history books for this purpose. Five thousand cases were taken without selection:

Ages.	Both.	Right.	Left.	Total number in each division.
Under 20.....	12	—	4	16
20 to 25.....	117	22	17	156
26 " 30.....	183	22	20	225
31 " 35.....	26	9	8	43
36 " 40.....	17	5	8	30
41 " 45.....	—	1	3	4
46 " 50.....	1	1	—	2
Over 50.....	—	1	—	1
Total.....	356	61	60	477

In one hundred cases seen only in consultation, the percentage is much greater:

Left appendage:

Under 20 years.....	1 case.
Between 20 and 25 years.....	1 "
" 26 " 30 "	2 cases.
" 31 " 35 "	6 "
Total.....	10 "

Right appendage:

Between 31 and 35 years	6 cases.
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Both adnexa:

Between 20 and 25 years	7 cases.
" 26 " 30 "	6 "
" 31 " 35 "	3 "
" 36 " 40 "	1 "
" 41 " 45 "	1 "
Total.....	18 "

Making a total of 34 patients, out of 100 patients seen by me with regard to diagnosis, who were affected with inflammation of the uterine adnexa.

We also notice in our observations that the salpingitis was never primary. A. Martin, from an analysis of 287 cases of tubal disease, has made a similar observation.¹

Do not for a moment think that I want to see the various other remedies used in diseases of the uterine appendages supplanted by the knife; nay, on the contrary, I uphold conservatism, and am a strong advocate for the use of massage, electricity, etc.; but I cannot stand by and allow this or that one to put on claims for a certain mode of treatment and decry the surgeon's knife, irrespective of the etiological factor and the pathological state of the disease. My conscience, and the duty we owe to the public at large, will not allow me to become one-sided and unscientific, nor permit enthusiastic reports to go among the members of our profession, without giving a word of caution when my experience and judgment dictate it. We are physicians, not charlatans who cure cancer with salves, and consumption by faith; and as physicians let us be broad and eclectic in our treatment of disease.

¹ Zeitschrift für Geburtshelkunde und Gynäkologie, vol. xiii., p. 300.

